



# IDAHO POTATOES

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## IDAHO RUSSET POTATO SIZE AND GRADE SUMMARY - 2003 CROP

The statistics in this publication were obtained from the 2003 Potato Objective Yield Survey. The Idaho Agricultural Statistics Service would like to thank all growers who allowed the enumerators to dig samples in their fields. Without the voluntary cooperation of the farmers themselves, obtaining valid and timely agricultural statistics would be much more difficult. Because the samples of potatoes were dug by hand, the size and grade statistics in this document do not reflect harvesting or handling damage.

The survey results showed for the 2003 crop, 23.3 percent of the potatoes were at least ten ounces, 15 percent less than the amount that reached that size in 2002. Of the Russet potatoes in the 2003 sample, 69.7 percent met the 2.0 inch or 4 oz. minimum size and grade requirements for U.S. No. 1 potatoes. Processing grade, with a 1.5 inch minimum, accounted for 29.4 percent of the 2003 crop.

### PROCEDURE

The 2003 Potato Objective Yield Survey consisted of 281 samples located throughout Idaho in fields selected in an unbiased and random manner. The selection of sample fields was based on all known potato acreage planted in 2003, with each acre having an equal chance of being chosen. As a result, growers with large acreages were more likely to be selected to participate in this survey. Several sample fields with varieties other than russet were selected, but only the reports with Russet potatoes were used to compile the data in Tables 1 and 2. For each sample field, two plots were systematically located using computer generated random numbers. Each plot consisted of a twenty-foot section of a row. Digging of all samples occurred immediately preceding harvest or when all vines had died and growth of the tubers was no longer possible. Three hills of potatoes from each twenty-foot row section were carefully dug, counted, weighed, and then graded according to U.S.D.A. standards. Potatoes less than 1.5 inches in diameter were excluded from this procedure. To measure the harvest loss, post-harvest gleanings were taken for every fourth sample. The gleaning area consisted of two 3-by-6-foot plots, located five paces and five row space equivalents beyond the plots where the potato hills were dug. All potatoes and potato pieces, except whole potatoes under 1.5 inches in diameter, were collected, weighed, and graded. Geographic distribution of the 2003 sample fields is shown in the following table.

<u>AREA</u>	<u>COUNTIES</u>	<u>NO. OF SAMPLE PLOTS</u>
Southwest	Ada, Adams, Boise, Canyon, Elmore, Gem, Owyhee, Payette, Valley & Washington	33
Southcentral	Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka & Twin Falls	77
Eastern	Bannock, Bear Lake, Bingham, Bonneville, Franklin, Jefferson, Madison, Oneida & Power	139
Eastern Seed Counties	Butte, Caribou, Clark, Custer, Fremont, Lemhi & Teton	32
IDAHO TOTAL		281

**TABLE 1 – IDAHO RUSSET POTATOES: SIZE AND GRADE – 2003 CROP <sup>1/</sup>**

AREA AND GRADE	1 1/2" - 1 5/8"	1 5/8" - 1 7/8"	1 7/8" - 2"	2" or 4-6 oz	6-7 oz	7-8 oz	8-9 oz	9-10 oz	10-11 oz	11-12 oz	12-13 oz	13-14 oz	14 oz and over	Total
	Percentages (%)													
<b>SOUTHCENTRAL COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	25.5	8.1	7.6	5.5	5.2	4.0	3.7	3.2	2.2	6.1	71.1
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup> .....	2.1	7.7	5.2	1.9	1.0	1.1	1.1	0.9	0.9	0.7	0.7	0.6	4.0	27.9
Cull <sup>4/</sup> .....	-	-	0.1	0.2	0.1	0.2	-	0.1	0.1	-	-	-	0.2	1.0
<b>TOTAL</b> .....	2.1	7.7	5.3	27.6	9.2	8.9	6.6	6.2	5.0	4.4	3.9	2.8	10.3	100.0
<b>EASTERN COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	25.9	9.2	7.9	5.6	4.9	4.0	3.2	2.9	1.7	4.9	70.2
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup> .....	2.0	8.5	6.2	2.9	1.0	0.9	1.1	0.9	0.8	0.7	0.7	0.6	3.1	29.4
Cull <sup>4/</sup> .....	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	0.1	0.4
<b>TOTAL</b> .....	2.0	8.6	6.3	28.9	10.2	8.8	6.7	5.8	4.8	3.9	3.6	2.3	8.1	100.0
<b>EASTERN SEED COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	31.3	8.1	6.8	3.7	4.0	2.0	1.1	1.2	0.3	3.7	62.2
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup> .....	3.7	12.4	9.7	2.6	0.7	1.5	0.9	0.2	0.1	0.2	0.6	1.0	2.3	35.9
Cull <sup>4/</sup> .....	-	-	0.1	0.5	0.2	-	0.2	-	-	-	-	-	0.9	1.9
<b>TOTAL</b> .....	3.7	12.4	9.8	34.4	9.0	8.3	4.8	4.2	2.1	1.3	1.8	1.3	6.9	100.0
<b>TOTAL OTHER COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	26.2	8.7	7.7	5.4	5.0	3.8	3.2	2.8	1.7	5.2	69.7
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup> .....	2.2	8.6	6.2	2.5	1.0	1.0	1.1	0.8	0.7	0.6	0.7	0.7	3.4	29.5
Cull <sup>4/</sup> .....	-	0.1	0.1	0.2	0.1	0.1	-	0.1	0.1	-	-	-	-	0.8
<b>TOTAL</b> .....	2.2	8.7	6.3	28.9	9.8	8.8	6.5	5.9	4.6	3.8	3.5	2.4	8.6	100.0
<b>10 SOUTHWEST COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	19.4	6.1	7.2	5.6	5.8	3.8	3.4	2.7	2.6	11.3	67.9
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup> .....	1.1	4.5	4.1	2.1	2.2	2.1	1.8	1.7	1.2	1.8	0.5	1.6	6.9	31.6
Cull <sup>4/</sup> .....	-	-	-	-	-	-	-	-	-	0.2	-	-	0.3	0.5
<b>TOTAL</b> .....	1.1	4.5	4.1	21.5	8.3	9.3	7.4	7.5	5.0	5.4	3.2	4.2	18.5	100.0
<b>STATE</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	26.1	8.7	7.7	5.4	5.0	3.8	3.2	2.8	1.7	5.3	69.7
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup> .....	2.2	8.5	6.1	2.5	1.0	1.0	1.1	0.8	0.7	0.7	0.7	0.7	3.4	29.4
Cull <sup>4/</sup> .....	-	0.1	0.1	0.2	-	0.1	-	0.1	0.1	-	-	-	0.2	0.9
<b>TOTAL</b> .....	2.2	8.6	6.2	28.8	9.7	8.8	6.5	5.9	4.6	3.9	3.5	2.4	8.9	100.0

<sup>1/</sup> Gross yield basis.

<sup>2/</sup> Potatoes which meet the requirements for U.S. #1, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service.

<sup>3/</sup> Potatoes which meet the requirements for U.S. #2, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service.

<sup>4/</sup> Potatoes not meeting the requirements for U.S. #1 or U.S. #2, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service

**TABLE 2-- IDAHO RUSSET POTATOES: SIZE AND GRADE -- 2002 CROP<sup>1/</sup>**

AREA AND GRADE	1 1/2" - 1 5/8"	1 5/8" - 1 7/8"	1 7/8" - 2"	2" or 4-6 oz	6-7 oz	7-8 oz	8-9 oz	9-10 oz	10-11 oz	11-12 oz	12-13 oz	13-14 oz	14 oz and over	Total
	Percentages (%)													
<b>SOUTHCENTRAL COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	16.0	7.0	6.9	5.5	4.7	4.5	4.4	3.3	3.6	13.6	69.5
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	1.3	4.2	3.2	3.7	1.5	1.3	1.5	1.3	2.0	1.0	1.1	0.7	6.8	29.6
Cull <sup>4/</sup> .....	-	-	-	0.1	-	-	0.2	0.1	-	-	-	0.1	0.4	0.9
TOTAL .....	1.3	4.2	3.2	19.8	8.5	8.2	7.2	6.1	6.5	5.4	4.4	4.4	20.8	100.0
<b>EASTERN COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	18.1	6.4	6.8	5.9	5.3	4.3	3.6	3.0	2.6	11.7	67.7
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	2.0	5.0	3.6	3.4	1.5	1.5	1.2	1.1	1.3	1.1	0.7	0.9	7.6	30.9
Cull <sup>4/</sup> .....	-	0.1	0.1	0.4	0.1	0.2	0.1	0.1	0.1	-	0.1	-	0.1	1.4
TOTAL .....	2.0	5.1	3.7	21.9	8.0	8.5	7.2	6.5	5.7	4.7	3.8	3.5	19.4	100.0
<b>EASTERN SEED COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	21.3	6.4	6.5	4.5	4.8	2.4	3.6	3.1	2.4	5.8	60.8
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	2.0	6.4	5.0	6.7	1.7	2.1	1.7	1.3	1.3	1.2	1.7	1.3	6.3	38.7
Cull <sup>4/</sup> .....	-	-	0.2	0.2	-	-	0.1	-	-	-	-	-	-	0.5
TOTAL .....	2.0	6.4	5.2	28.2	8.1	8.6	6.3	6.1	3.7	4.8	4.8	3.7	12.1	100.0
<b>TOTAL OTHER COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	17.6	6.6	6.8	5.6	5.0	4.1	3.9	3.1	2.9	11.7	67.3
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	1.7	4.9	3.6	3.9	1.6	1.5	1.3	1.2	1.5	1.1	1.0	0.9	7.2	31.4
Cull <sup>4/</sup> .....	-	0.1	0.1	0.3	-	0.1	0.2	0.1	0.1	-	-	0.1	0.2	1.3
TOTAL .....	1.7	5.0	3.7	21.8	8.2	8.4	7.1	6.3	5.7	5.0	4.1	3.9	19.1	100.0
<b>10 SOUTHWEST COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	17.1	8.0	6.8	5.1	5.0	4.5	3.2	2.6	1.9	8.3	62.5
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	1.3	4.2	3.4	3.9	1.7	2.8	2.8	2.3	1.8	2.1	1.4	1.8	7.5	37.0
Cull <sup>4/</sup> .....	0.1	-	-	0.1	-	-	0.1	-	-	0.2	-	-	-	0.5
TOTAL .....	1.4	4.2	3.4	21.1	9.7	9.6	8.0	7.3	6.3	5.5	4.0	3.7	15.8	100.0
<b>STATE</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	17.6	6.6	6.8	5.6	5.0	4.2	3.9	3.2	2.9	11.8	67.6
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	1.7	4.8	3.6	3.9	1.6	1.5	1.4	1.2	1.5	1.1	1.0	0.9	7.1	31.3
Cull <sup>4/</sup> .....	-	0.1	0.1	0.3	-	0.1	0.1	0.1	-	-	-	0.1	0.2	1.1
TOTAL .....	1.7	4.9	3.7	21.8	8.2	8.4	7.1	6.3	5.7	5.0	4.2	3.9	19.1	100.0

1/ Gross yield basis.

2/ Potatoes which meet the requirements for U.S. #1, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service.

3/ Potatoes which meet the requirements for U.S. #2, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service.

4/ Potatoes not meeting the requirements for U.S. #1 or U.S. #2, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service

**TABLE 3 - IDAHO ALL POTATOES: AVERAGE NUMBER OF TUBERS PER HILL & HILLS PER ACRE  
2002 & 2003 CROPS <sup>1/</sup>**

AREA	NUMBER OF SAMPLES		AVERAGE NUMBER OF TUBERS PER HILL		AVERAGE NUMBER OF HILLS PER ACRE	
	2002	2003	2002	2003	2002	2003
Southwest	34	33	8.6	9.3	13,117	12,802
Southcentral	79	77	8.4	9.4	12,655	12,737
Eastern	142	139	7.7	8.9	12,162	12,162
Seed Co.'s	35	32	7.1	7.6	12,693	13,274
STATE	290	281	7.9	8.9	12,393	12,483

<sup>1/</sup> Based on row measurements and counts in potato fields selected for objective yield samples.

**TABLE 4 -IDAHO ALL POTATOES: QUANTITY LEFT IN FIELD AFTER HARVEST - 2002 & 2003 CROPS <sup>1/</sup>**

AREA	2002 CROP		2003 CROP	
	NUMBER OF SAMPLES	CWT. PER ACRE	NUMBER OF SAMPLES	CWT. PER ACRE
Southwest	9	16	8	22
Southcentral	17	24	17	33
Eastern	36	29	33	24
Seed Co.'s	10	23	8	34
STATE	72	26	66	27

<sup>1/</sup> Potatoes left in the field at time of harvest. Based on counts in potato fields selected for postharvest samples.

**TABLE 5 -SELECTED STATES LONG POTATOES (RUSSET & SHEPODY) - 2003 CROP <sup>1/</sup>**

AREA AND SIZE	11/2" - 15/8"	15/8" - 17/8"	17/8" - 2"	2"or 4-6	6-7 oz	7-8 oz	8-9 oz	9-10 oz	10-11 oz	11-12 oz	12-13 oz	13-14 oz	14 oz and over	Total
ID <sup>2/</sup>	Inches				Ounces									
	Percentages (%)													
	2.2	8.6	6.2	28.8	9.7	8.8	6.5	5.9	4.6	3.9	3.5	2.4	8.9	100.0
	1.6	6.4	4.9	28.4	11.8	10.7	9.1	7.1	5.7	3.7	3.4	1.7	5.5	100.0
	1.1	6.3	3.8	23.5	11.1	10.9	8.5	7.7	6.0	4.8	4.3	2.4	9.6	100.0
	1.7	4.7	3.6	22.9	9.9	9.2	8.0	5.9	6.1	5.0	4.1	3.3	15.6	100.0
	1.0	3.9	3.8	21.7	8.5	8.5	8.4	7.7	5.8	5.6	4.6	3.7	16.8	100.0
WI	3.0	3.4	4.5	30.9	11.4	9.9	8.3	7.0	4.4	3.9	3.1	2.5	7.7	100.0

<sup>1/</sup> Gross yield basis. <sup>2/</sup> Russet potatoes only.

**TABLE 6 - SELECTED STATES GRADING CATEGORIES - 2003 CROP <sup>1/</sup>**

AREA AND GRADE	U.S. NO. 1 2 INCH MINIMUM <sup>2/</sup>	U.S. NO. 2 OR PROCESSING USABLE <sup>3/</sup>	CULL <sup>4/</sup>	TOTAL
Percentages (%)				
LONG POTATOES				
ID <sup>5/</sup>	69.7	29.4	0.9	100.0
ME <sup>6/</sup>	61.2	21.7	17.1	100.0
MN	80.1	17.0	2.9	100.0
ND	73.9	18.1	8.0	100.0
OR	77.3	21.8	0.9	100.0
WA	79.1	19.2	1.7	100.0
WI	83.8	16.2	--	100.0

<sup>1/</sup> Gross yield basis. <sup>2/</sup> Potatoes which meet the requirements for U.S. #1, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service <sup>3/</sup> Potatoes which meet the requirements for U.S. #2, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service. <sup>4/</sup> Potatoes not meeting the requirements for U.S. #1 or U.S. #2, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service <sup>5/</sup> Russet potatoes only. <sup>6/</sup> Percent of net yield - adjusted for field loss.